# Dart Session 5

Problem Solving Task

• Given n numbers find the average of them.

#### Input

The first line consists of an integer t, the number of test cases. Each test case consists of 2 lines. In each test case the first line consists of an integer n, the count of numbers. The next line consists of n integers.

#### Output

For each test case print the average of the numbers without decimal places.

# Example

```
Input:
Output:
```

## Example

#### Input:

2

468

7547

#### Output:

Aayush

Akash

- Akash and Aayush play the following number game. First they choose a number N (1<=N<=1000000000). Then both of them take their turn one by one. In a turn player has to subtract 1 from the number if it is odd or divide the number by 2 if it is even. Game end when the number becomes zero. Aayush has a dominating nature so he always play first. Help them in finding out who will win the game.
- Input: First line contains T, the number of test cases. Following T lines contain 1 integer each, the value of N.
- Output: For each test case print "Aayush" if Aayush wins else print "Akash".

- Sum Numbers from 1 to N, since N is an integer value
- Input: N the number you should to sum numbers from 1 to N for it
- Output : the summation result
- Bonus : (Don't Use Loop)

• Example :

Input: 10, output: 55

Input: 1500, output: 1125750

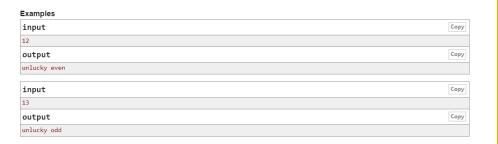
- Write a function that returns the largest element in a list.
- Input: [1,5,205,4,66,99,105]
- Output: 205
- Input: [66,58,74,21,90,44,68,98]
- Output: 98

- On Tuesdays Hassan and Ali have a heavy schedule. After the first 5 classes they finally had their breaktime. In the playground they found three sticks. As Hassan is a clever student, he asked Ali if he can form a triangle with these sticks? Given the length of each stick, Help Ali answer the question.
- input: You will be given 3 integers X, Y, Z
- Output: If Ali can form a triangle output "YES", otherwise "NO".

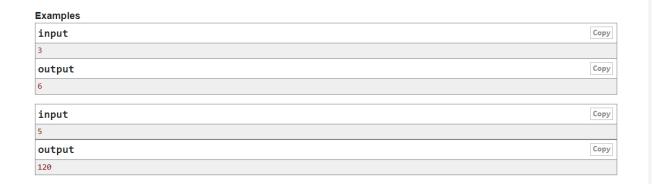
# Examples input Copy 3 4 5 output YES input Copy 1 2 3 output Copy NO

- Our friend Zoma found a magical cave so he entered it. After he
  walked for several hours in the cave he found a magical door which
  opens if he said the right magical words, there was also a number X
  above the magical door.
- He found a piece of paper near the magical door written on it: "To open the magical door you should say X is "lucky" or "unlucky" also you should say X is "even" or "odd" ".
- Zoma knows that the lucky numbers are the numbers which ends with 4 or 7, can you tell Zoma the magical words to help him open the magical door?
- Input: the input consists of integer X
- Output: Print two words separated with space between them, the first word should be "lucky" or "unlucky" and the second word should be "even" or "odd" according to the problem





- Given a number N, compute its factorial Fact(N).
- Where Fact(N) = N \* (N-1) \* (N-2) \* ...
  \* 3 \* 2 \* 1.
- Input
- The input consists of one integer N
- Output
- Print the factorial of N.



- Consider the following algorithm to generate a sequence of numbers.
- Start with an integer n. If n is even, divide by 2. If n is odd, multiply by 3 and add 1. Repeat this process with the new value of n, terminating when n = 1. For example, the following sequence of numbers will be generated for n = 22:
- 22 11 34 17 52 26 13 40 20 10 5 16 8 4 2 1
- Given *n*, print the generated sequence.
- Input
- The first line of input consists of a single integer T, the number of test cases. Followed by T lines, each line consists of a single integer n
- Output
- For each test case, print the sequence generated by the integer *n*.



 Write a program in Dart to remove all whitespaces from String

- Example
- Input : Hello My Name Is Ahmed
- Output: HelloMyNameIsAhmed

• Write a program (function) that takes a list and returns a new list that contains all the elements of the first list without all the duplicates.

- Example
- Input: [1,1,1,2,2,2,2,6,2,2,20,3,3,3,4,4,4,4,5,5,5,5,5,5,5,5,5,10,10,10]
- Output : [1,2,6,20,3,4,5,10]

• Write a Dart code that takes this list and makes a new list that has only the even and prime elements of this list in it.

- Example
- Input: a = [1, 4, 5, 7, 9, 16, 25, 36, 49, 64, 81, 100].
- Output : [4 , 5 , 7 , 16 ,36, 64 ,100]